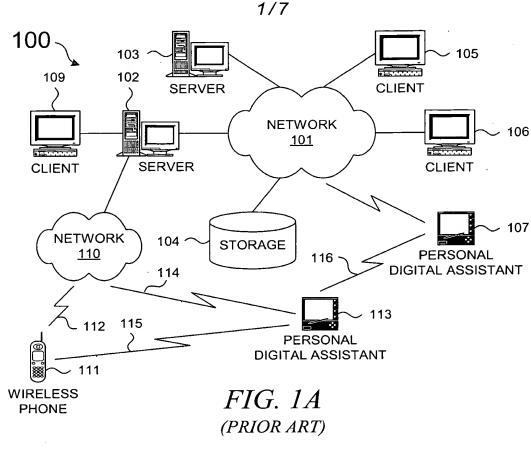


Method and system for a generic metadata-based mechanism to migrate relational data between databases



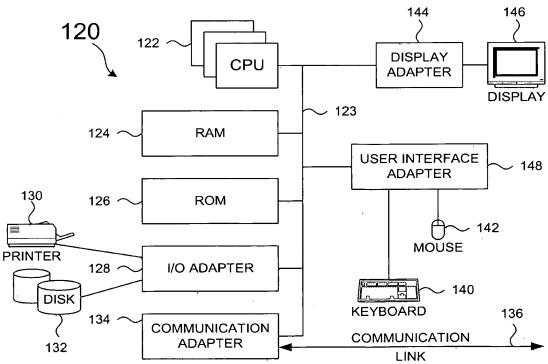


FIG. 1B (PRIOR ART)

Method and system for a generic metadata-based mechanism to migrate relational data between databases

2/7



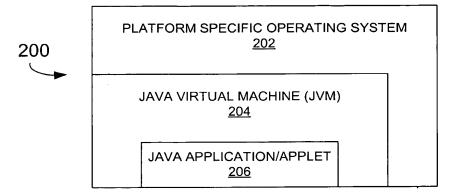


FIG. 2 (PRIOR ART)

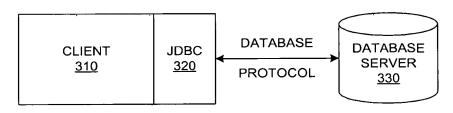


FIG. 3A (PRIOR ART)

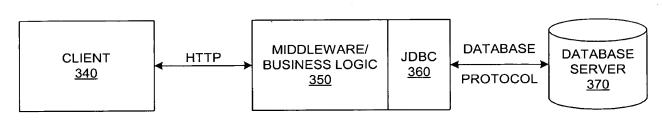


FIG. 3B (PRIOR ART)

#### Method and system for a generic metadata-based mechanism to migrate relational data between databases

3/7

| AUTHOR_ID (PK) | NAME                        | URL                | DESCRIPTION  |  |  |
|----------------|-----------------------------|--------------------|--|--|--|
| ADAM<br>APON   | ADAMS, JOHN<br>APONE, KEVIN | HTTP://<br>HTTP:// | "This author received an IEEE" "After spending ten years in" |  |  |
|                | •                           | •                  | •  |  |  |
|                | •                           | •                  | •  |  |  |
|                | •                           |                    | •  |  |  |
|                |                             |                    |  |  |  |

400 -

| ISBN (PK)                        | AUTHOR_ID (PK) | SEQ_NO |
|----------------------------------|----------------|--------|
| 0-08-882-111-4<br>0-07-456-432-1 | ADAM<br>APON   | 1 4    |
|                                  |                |        |
|                                  |                | •      |
|                                  |                | •      |
| <u></u>                          |                |        |

BOOK\_AUTH\_TABLE 420

| ISBN (PK)                        | TITLE                             | PUBLISHER_ID   | BLISHER_ID URL     |                |
|----------------------------------|-----------------------------------|----------------|--------------------|----------------|
| 0-08-882-111-4<br>0-07-456-432-1 | BEYOND THE ARTIC<br>GUIDE TO JAVA | 00989<br>01432 | HTTP://<br>HTTP:// | 27.95<br>15.00 |
| •                                | •                                 |                |                    | -              |
| •                                | •                                 |                | •                  | •              |
| •                                | •                                 | -              | •                  | •              |
| BOOK TA                          | ABLE 430                          |                | <del>-</del>       |                |

FIG. 4

Method and system for a generic metadata-based mechanism to migrate relational data between databases

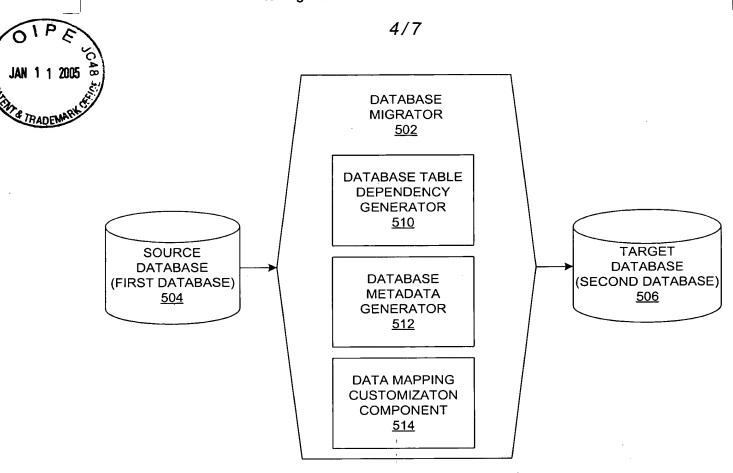


FIG. 5A

# JAN 1 1 2005 AB

#### U.S. Serial Number 09/717,818 Atty. Docket # AUS9-2000-0552-US1 George et al.

Method and system for a generic metadata-based mechanism to migrate relational data between databases

5/7 **BEGIN** READ METADATA INFORMATION FROM SOURCE DATABASE 550 GENERATE TABLE DEPENDENCY INFORMATION FOR TABLES IN SOURCE DB <u>552</u> GENERATE METADATA INFORMATION ABOUT EACH TABLE IN SOURCE DB <u>554</u> IDENTIFY NEXT TABLE TO BE PROCESSED USING TABLE DEPENDENCY INFO **555** READ DATA FROM SOURCE DATABASE 556 APPLY CUSTOM MAPPINGS BETWEEN SOURCE DB AND TARGET DB <u>558</u> WRITE DATA TO TARGET DATABASE <u>560</u> MORE ROWS OF DATA IN THE CURRENT TABLE YES IN SOURCE DATABASE? 562 NO MORE TABLES TO BE MIGRATED FROM YES SOURCE DATABASE? <u>564</u> NO **END** 

FIG. 5B



#### Method and system for a generic metadata-based mechanism to migrate relational data between databases

6/7

```
<Table name="AUTH_TABLE" numattributes="4">
                         <PrimaryKey>
                          <Field name="AUTHOR_ID" pos="1">
                                <Type> VARCHAR2 </Type>
                                <Nullable> FALSE </Nullable>
                                <Length> 20 </Length>
                           </Field>
FIG. 6A
                         </PrimaryKey>
                         <Field name="NAME" pos="2">
                               <Type> VARCHAR2 </Type>
                               <Nullable> FALSE </Nullable>
                               <Length> 40 </Length>
              610
                          </Field>
                          <Field name="URL" pos="3">
                               <Type> VARCHAR2 </Type>
                               <Nullable> FALSE </Nullable>
                                <Length> 1024 </Length>
                          </Field>
                          <Field name="DESCRIPTION" pos="4">
                               <Type> VARCHAR2 </Type>
                               <Nullable> FALSE </Nullable>
                               <Length> 512 </Length>
                          </Field>
                        </Table>
```

```
<MappingRecord TargetTablename="T_AUTH_TABLE" >
           <SourceTableName> AUTH TABLE 
           <Field position="1">
              <TargetFieldName type= "String"> T AUTHOR_ID </TargetFieldName>
              <SourceFieldName> AUTHOR ID 
              <Truncatable> NO </Truncatable>
           </Field>
           <Field position="2">
              <TargetFieldName type= "String"> T_AUTHOR_NAME </TargetFieldName>
              <SourceFieldName> NAME </SourceFieldName>
              <Truncatable> NO </Truncatable>
           </Field>
           <Field position="3">
              <TargetFieldName type= "String"> T_URL </ClassField>
620
              <SourceFieldName> URL </SourceFieldName>
              <Truncatable> NO </Truncatable>
           </Field>
           <Field position="4">
              <TargetFieldName type= "String"> T_DESCRIPTION </TargetFieldName>
              <SourceFieldName> DESCRIPTION </SourceFieldName>
              <Truncatable> YES </Truncatable>
           </Field>
           <Field position="5" default="Unknown">
              <TargetFieldName type= "String"> T_LOCATION </TargetFieldName>
              <SourceFieldName></SourceFieldName>
           </Field>
         </MappingRecord>
```

FIG. 6B



#### Method and system for a generic metadata-based mechanism to migrate relational data between databases

7/7

| T_AUTHOR_ID | T_AUTHOR_NAME | T_URL | T_DESCRIPTION | T_LOCATION |
|-------------|---------------|-------|---------------|------------|
|             |               |       |               |            |
|             |               |       |               |            |
| AUTH TAE    | BLE 630       |       |               |            |

#### FIG. 6C

```
<Table Name="AUTH_TABLE">
       <PrimaryKey>
              <Field name="AUTHOR_ID" type="VARCHAR2"></Field>
       </PrimaryKey>
       <Dependent Name="BOOK_AUTH_TABLE">
              <ForeignKey>
                     <a href="#">Attribute position="1">
                            <Parent>AUTHOR_ID</Parent>
                            <Child>AUTHOR_ID</Child>
                     </Attibute>
              </ForeignKey>
       </Dependent>
</Table>
<Table Name="BOOK_AUTH_TABLE">
       <PrimaryKey>
              <Field name="ISBN" type="VARCHAR2"></Field>
       </PrimaryKey>
       <Dependent Name="BOOK_TABLE">
              <ForeignKey>
                     <Attribute position="1">
                             <Parent>ISBN</Parent>
                             <Child>ISBN</Child>
                     </Attibute>
              </ForeignKey>
       </Dependent>
</Table>
<Table Name="BOOK_TABLE">
       <PrimaryKey>
              <Field name="ISBN" type="VARCHAR2"></Field>
       </PrimaryKey>
</Table>
```

FIG. 6D